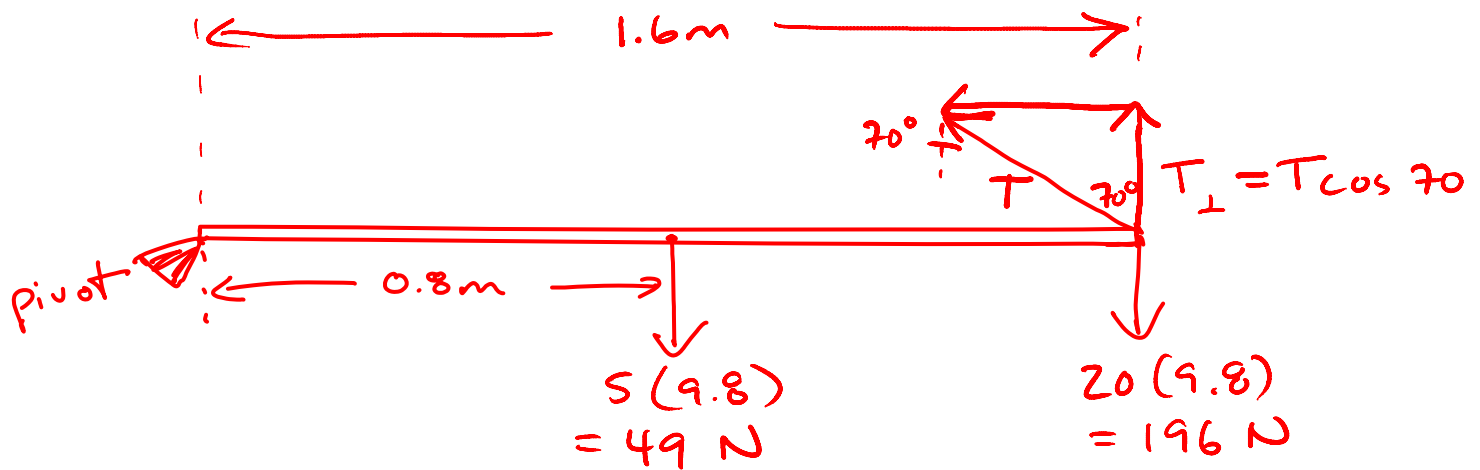
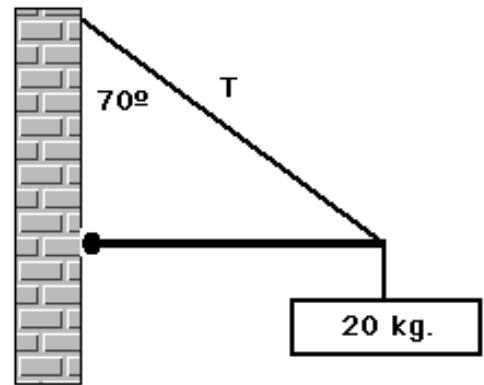


**Example #12.** In the following diagram, the 1.6 m-long uniform bar has a mass of 5.0 kg. Calculate the tension "T" of the cable supporting the 20 kg mass hanging on the end of the beam.



$$\tau_{cw} = \tau_{ccw}$$

$$49(.8) + 196(1.6) = \overbrace{T \cos 70}^{T_{\perp}} (1.6)$$

$$T = 6.4 \times 10^2 \text{ N}$$